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10/564,322

06/26/2006

Kai Desinger

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EXAMINER

DI CICCIO, JOHN R

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,322	<b>Applicant(s)</b> DESINGER ET AL.	
	<b>Examiner</b> John R. Di Cicco	<b>Art Unit</b> 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because **a)** the lines, numbers and letters are not uniform, clean and well defined (of a generally poor quality, i.e. hand-written) in **Figures 1, 3, and 5** (37 CFR 1.84(l)). Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### *Specification*

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet **within the range of 50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is not within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

Claims 1-4 and 6-12 are objected to because of the following informalities: The word "characterised" should be spelled as --characterized--. Examiner notes that Applicant uses both spellings, "characterised" and "characterized", in claim 1.

Claim 6 is objected to because of the following informalities: Claim 6 depends from canceled claim 5. Appropriate correction is required.

Claim 9 is objected to because of the following informalities: It is unclear if the outside diameter or the inside diameter of the hollow body is the diameter being described; however, an outside diameter of the hollow body of the instant claim language corresponds with Figure 4.

Claim 12 is objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1-4, 6-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire et al. (5,913,854) in view of Desinger (US 6,723,094 B1).**

Maguire et al. disclose a surgical probe (Fig. 1, #2) comprising a handle (Fig. 1, #4) and a shaft (Fig. 1, #6) which is connected to the handle (column 3, lines 43-44) and has two axially mutually spaced electrodes (one or more

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electrodes along the shaft, column 1, lines 33-34), of which an electrode nearer the handle forms a proximal electrode and the other electrode which is far from the handle forms a distal electrode (Fig. 1, #18, shows an electrode nearer to the handle than the adjacent distal electrode), wherein the electrodes respectively form an outside surface of the shaft (electrodes on the outside surface of the shaft, Fig. 1, #18) and are separated from each other by an insulator (alternating electrodes and polymer sections, column 4, lines 3-5), wherein the outside diameter of the two electrodes and the outside diameter of the insulator are approximately equal (approximately equal outside diameters of adjacent electrode and polymer sections, Fig. 2, #18 and #24) and wherein the shaft has a fluid passage for a cooling fluid, which extends in the interior of the shaft from the handle into the distal electrode (a handle with a fluid port which permits cooling fluid to be directed through shaft to cool electrode, column 3, lines 60-63), characterized in that the shaft has a distally closed hollow body which is connected to the handle and forms the distal electrode (a fluid passageway so that cooling fluid after reaching the distal end of the tip section of the catheter can be returned to the source so the fluid does not flow into the body but rather recirculates, column 5, lines 15-19), carries the insulator as well as the proximal electrode (shaft with electrodes and polymer sections, insulator, Fig. 2, #10) and an insulating layer which is arranged in the radial direction between the hollow body and the proximal electrode (PTFE, insulating layer, could be used to cover the inner surface of the electrode and shaft and not impede heat transfer between the cooling fluid and electrode, column 2, lines 4-9); and further

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characterized in that the probe possesses a mechanical strength that permits insertion of the shaft into body tissue (ablate cardiac tissue, col. 7, lines 1-15) but fail to disclose a hollow body that is electrically conductive; the hollow body shaped to a point at its distal end; and a hose in the interior of the fluid passage with a mouth opening in the proximity of the closed distal end of the fluid passage, which hose is so arranged and connected that a cooling fluid is to be passed through the hose into the proximity of the distal end of the fluid passage, there issues from the mouth opening of the hose and can flow back between the hose and the wall of the fluid passage to the proximal end of the shaft.

However, Desinger discloses a front cylinder (10) which forms the distal end of the instrument, where the front cylinder terminates at its free end in a point (12), and adjoining the front cylinder is a tubular outer conductor (2) which in its interior accommodates an insulating tube through which extends an inner conductor, which is electrically and mechanically connected to the front cylinder (col. 11, lines 16-29). In addition, Desinger discloses a flushing hoze (110) which discharges fluid at its distal end, which then in contact with the inside wall of the tube portions flows back through the hollow duct to the proximal end and cools the two tube portions (col. 14, lines 38-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a hollow body inner conductor as taught by Desinger, since Desinger states at column 2 lines 5-15 that such a modification would connect the electrodes to an ac voltage source by the inner conductor.

**Regarding claim 2**, Maguire et al. disclose the insulating layer arranged both between the hollow body and the proximal electrode and also between the hollow body and the insulator (PTFE could be used to cover the inner surface of the electrode and shaft and not impede heat transfer between the cooling fluid and electrode, column 2, lines 4-9).

**Regarding claim 3**, Maguire et al. disclose that the insulating layer is formed by shrink tube (column 2, lines 4-9). It is well known in the art that shrink tube is manufactured from thermoplastic material such as PTFE.

**Regarding claim 4**, Maguire et al. disclose that the proximal electrode is formed by a metal tube of a diameter which is substantially equal over its length and of substantially equal wall thickness (column 6, lines 48-50).

**Regarding claim 8**, Maguire et al. disclose that in the region of the distal electrode the hollow body is of an outside diameter which is approximately equal to the outside diameter of the proximal electrode or of the insulator (approximately equal distal hollow body diameter to the outside diameter of the proximal electrode or the insulator, Figs. 1 and 2).

**Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire et al. and Desinger as applied to claim 1 above, and further in view of Pantages et al. (US 6,529,760 B2).**

Maguire et al. and Desinger disclose the invention set forth above but fails to teach the hollow body is of a smaller diameter in the region of the insulator and the proximal electrode than in the region of the distal electrode.

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However, Pantages et al. teach conductor (66) has a stepped tubular section (70) covered with an insulator (74) which inserts into the conductive ring (60; column 10, lines 5-13; and Figure 2).

It would have been obvious to one of ordinary skill in the hand-held electrosurgical art to have modified Maguire et al. and Desinger with a hollow body design as taught by Pantages et al. because it would have enabled the distal region to be inserted easier into tissue.

**Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maguire et al. and Desinger as applied to claim 1 above, and further in view of Crites et al. (3,568,660).**

**Regarding claim 11**, Maguire et al. and Desinger disclose the invention set forth above but fail to disclose that at its proximal end the shaft is connected to the handle and is there partially embedded in sealing material in such a way that the tube forming the proximal electrode is completely embedded at its proximal end in the sealing material while the proximal end of the hollow body projects from the sealing material.

However, Crites et al. teach a handle fitted over the cylinder and an electrically insulating epoxy applied over the exposed surface of the cylinder and a surface of the handle with the proximal ends of the conductors soldered to the conductors (column 5, lines 31-46).

It would have been obvious to one of ordinary skill in the hand-held electrosurgical art to have modified Maguire et al. and Desinger with electrically

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insulating epoxy applied over the exposed surface of the cylinder and a surface of the handle with the proximal ends of the conductors soldered to the conductors as taught by Crites et al. because it would have enabled the proximal electrode to be preferably electrically contacted within the sealing material.

**Regarding claim 12**, Maguire et al. and Desinger disclose the invention set forth above but fail to teach that the proximal electrode is electrically contacted within the sealing material.

However, Crites et al. teach the proximal ends of the conductors are soldered to the conductors (column 5, lines 45-46).

It would have been obvious to one of ordinary skill in the hand-held electrosurgical art to have modified Maguire et al. and Desinger with proximally soldered ends as taught by Crites et al. because it would have enabled the proximal electrode to be electrically contacted within the sealing material.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4 and 5-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 7-15, and 19 of copending Application No. 10/729,040. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claimed invention is narrower in scope, and thus claims 1, 5, 7-15, and 19 of copending Application No. 10/729,040 would necessarily infringe on the instant claimed invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

The Examiner has withdrawn the initial objection to the Drawings; however, the Examiner objects to the Drawings submitted February 11, 2008 for the reasons noted above. In addition, the Examiner has withdrawn the initial objection to the Specification; however, the Examiner objects to the Abstract submitted February 11, 2008 for the reasons noted above. The Examiner has withdrawn claim objection due to cancellation of claim 5; however, the Examiner

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objects to the claims submitted February 11, 2008 for the reasons noted above.

In addition, the Examiner has withdrawn the rejection of claim 8.

Applicant's arguments with respect to claims 1-4 and 6-12 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments which are relevant to Maguire et al. are addressed as follows: Applicant's arguments filed February 11, 2008 have been fully considered but they are not persuasive. Applicant argues that "Maguire's catheter fails to show a stiff probe having the recited 'mechanical strength'". The Examiner disagrees. Maguire shows a catheter in Figure 1 used to ablate cardiac tissue (col. 7, lines 1-15). In addition, the claim language "the probe possesses a mechanical strength" (second to last line in Claim 1) is broad in scope. Thus, Maguire shows a catheter with mechanical strength that permits insertion of the shaft into the body to ablate cardiac tissue. Furthermore, the Examiner notes that the word "probe" implies a flexible surgical instrument:

probe: A slender, flexible surgical instrument used to explore a wound or body cavity. The American Heritage Dictionary of the English Language: Fourth Edition. 2000.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 20020120258 A1; US 5221281 A; US 4907589 A; US 20040167517 A1; US 6757565 B2; US 4688569 A; US 4449528 A; US 6312428 B1; US 6106524 A; and US 5458597 A.

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***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R. Di Cicco whose telephone number is (571) 270-5039. The examiner can normally be reached on M-Th 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John R. Di Cicco/  
Examiner, Art Unit 3739

/Michael Peffley/  
Primary Examiner, Art Unit 3739